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ABSTRACT

This paper discusses the outcomes of a study that investigated the effects of Special Olympics certification of coaches upon the performances of 160 competitors (ages 12-41) with mental retardation from 22 countries who participated in the 1987 International Special Olympics. Composite standardized scores for all five events of the pentathlon were analyzed using one-way ANOVA corrected for unequal sample size. Although, as expected, there were no significant differences between "non-certified" trained/coached subjects and the Special Olympics International (SOI) "certified" trained/coached subjects, subjects exposed to SOI-certified training/coaching performed better. The SOI Sports Instructional Training Program and its requirements are described. (Contains 10 references.) (Author/CR)

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The Effect of Certified Special Olympics Training Upon the Performance of Mentally Retarded Participants.

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The Effect of Certified Special Olympics Training Upon the Performance of Mentally Retarded Participants.

ABSTRACT

The purpose of this *ex post facto* longitudinal study (1987-1991) was to determine the effect of Special Olympics Certification of coaches upon the performance of mentally retarded (MR) individuals (n=160) from twenty two countries in International Special Olympics competition. Composite standardized scores for all five events of the pentathlon were analyzed using one-way ANOVA corrected for unequal sample size. Even though as expected, there were no significant differences between "non-certified" trained/coached and Special Olympics International (SOI) "certified" trained/coached MR subjects, subjects exposed to SOI certified training/coaching performed better.

The Effect of Certified Special Olympics Training Upon the Performance of Mentally Retarded Participants

Special Olympics is "an international program of physical fitness, sports training, and athletic competition for mentally retarded children and adults" (Special Olympics, 1982, p.1). To date there has been a rather limited number of reported investigations concerned with the training/coaching of mentally retarded (MR) participants for Special Olympics competition (Johnson, Sundheim & Santos, 1989; Low and Sherrill, 1988; Roswal, 1988). In 1978, Special Olympics International (SOI) cultivated the growth of a sports skills instructional program for the MR with individual sports program guides and by 1987 had trained over 79,000 volunteers (Cheatum, 1988). Winnick (1979) in addition stated that MR participants in SOI competition should possess necessary prerequisite physical skills prior to actual competition.

This was of particular interest due to the fact that SOI programs involved over 700,000 MR participants in over ninety countries (Joseph P. Kennedy Foundation). Previous studies focused primarily upon the training techniques, not performance results, of MR participants for SOI competition. One study (Johnson, Sundheim & Santos, 1989) seriously investigated certified SOI training/coaching and found an increase in performance compared to non-trained/coached participants. Miller (1987), however, surveyed SOI coaches (n=194) in what was perhaps the first to study to identify a profile of the SOI coach.

SOI began its Sports Instructional Training Program in 1981 (Cheatum, 1988). Miller (1987) found that the majority of SOI certified coaches (70%) did not feel qualified to train the MR during the 8.4 weeks of 3.6 hours of training per week prior to participation in SOI competition. In 1986, SOI certified training/coaching was required only for the international level of competition. Perhaps such was why since 1988, SOI has required that all coaches, officials, and games directors be certified to train and coach MR participants involved at all levels for any SOI

competition. Thus, the purpose of this *ex post facto* longitudinal study (1987-1991) was to determine the effect of volunteer based SOI Coaching Certification upon the sport performance of MR participants in SOI competition.

METHOD

A population of MR participants ($n = 80$) from twelve countries who competed in the pentathlon (i.e. 100 meters; long jump; shot put; high jump; 400 meters) at the 1987 International Special Olympics held in South Bend, Indiana were selected as the control group since none of the subjects were exposed to SOI certified training/coaching in the event. The pentathlon was a new international event in 1987 and even though SOI had required certified training/coaching at the international level since 1986, it was not required for this event in 1987.

A population of MR participants ($n = 60$) from nineteen countries who competed in the pentathlon at the 1991 International Special Olympics held in Minneapolis, Minnesota were selected as the experimental group because all subjects were exposed to certified SOI training/coaching in the event. SOI certified training consisted of a volunteer coach attending a one day recognized SOI Training School and participating in a Special Olympics General Session in addition to an eight hour specific sport coaching session. The volunteer coach then had to complete a minimum of ten (10) hours of practicum in coaching SOI MR athletes in that sport prior to being certified by SOI.

Pentathlon scores were not differentiated or analyzed by age (CA range = 12-41) due to the fact that in SOI competition individual groupings were homogeneous by a standardized pre-event scored performance. Nor were Pentathlon scores differentiated or analyzed by gender ($n = 24$ females; $n = 136$ males) due to the fact that SOI competition groupings were homogeneous for gender in the pentathlon.

The true factor under examination was the certified SOI training/coaching effect upon MR participant performances in SOI competition. Individual raw data (i.e. time or distance) achieved by MR participants in each event of the pentathlon were converted to standard scale scores ($R = 0-1000$) according to a SOI weighted scoring table. Composite standardized scores for all five events ($R = 24-5000$) of the pentathlon were then analyzed using one-way ANOVA corrected for unequal sample size to test whether the composite mean performances were equal. To avoid a Type I error the ANOVA was selected over the t -test for independent samples due to the fact that experiment-wise error rate may not have been equal to established alpha of .05.

RESULTS

The mean of MR subjects' performances between control and experimental groups was not significant ($MS = 644957.6$ vs. 360446.1 ; $D.F. = 1/138$). Even though as hypothesized, there was no significant difference between non-certified trained/coached and certified trained/coached MR subjects ($F = 1.789$), subjects exposed to certified training performed better ($M = 1844.1$ vs. 1981.2).

Insert Table 1 about here

DISCUSSION

Although results identified increased performances by SOI trained/coached MR participants they were not significant and were in contrast to Johnson, Sundheim & Santos' (1989) findings. It may have been possible that study's significant results were due to a small sample size ($n = 28$) and a very controlled training environment that resulted in a five percent

(5%) gain per week over an eight (8) week training period. There appeared to be no knowledge base that SOI certified training/coaching techniques universally were as controlled as was Johnson, Sundheim & Santos' (1989) training/coaching procedures given that the SOI's 79,000 coaches were volunteers (Cheatum, 1988) and the vast majority (i.e. 70%) still felt unqualified in that capacity (Miller, 1987).

The results of this study supported the premise of SOI competition in that the primary focus of such should be to afford the MR an opportunity to participate in sport competition and associated social interactions. With this in mind, any speculation by SOI training/coaching personnel, participants themselves, or SOI itself that exposure to certified training/coaching will increase MR participant performances was contraindicated. It was clear that if increased sport competition performances by the MR in Special Olympics was the focused intention of SOI in requiring certified training programs that such results were due to chance, or extreme specificity, as opposed to volunteer training/coaching programs. There was, however, no such indication by SOI (Joseph P. Kennedy Foundation) other than to increase the qualification of volunteers and the quality of the SOI experience itself. Results of this study further supported the importance of retaining this perspective so as not to disillusion either MR participants or coaches.

It was possible, however, that certified training/coaching of the MR for Special Olympics may have had a life-long value in preparing for any type of leisure activity but additional inquiry was indicated prior to such a claim. This judgment was supported by Miller's (1987) finding that the mean time spent in SOI training of 3.6 hours per week was not sufficient to increase sport performances but perhaps may have been sufficient to increase the MR participant's self concept. If such an inference could be construed as appropriate as suggested by Ballard and Calhoun (1991), the ramifications for special education were potentially interesting. With less than four (4) hours per school week dedicated to structured self-concept building experiences for the MR and

less than twenty (20) hours of teacher training, significant results may be possible. Even more support to this notion was found in Gibbons & Bushakara's (1989) study that resulted in higher peer acceptance and increased self confidence by MR participants as a result of SOI training, coaching, and competition. Yet prior to formalizing this conjecture it would appear appropriate to thoroughly investigate any differences in MR self-concept following SOI competition and certified training/coaching.

Nonetheless the potential benefit of positively increasing the life cycle of the MR through SOI was most certainly promising, cost-efficacious, and capable of serving as an exemplary model in responding to the wholistic needs of participants, including coaches. Certainly the mean increase of MR performances found in this study warranted continued investigation and carryover into other areas.

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Table 1. Analysis of Variance Between SOI Non-Certified Trained/Coached MR Performances and SOI Certified Trained/Coached MR Performances

Variation	Sum Squares	DF	Mean Squares
SSG (Treatment)	644957.671	1	644957.671
SSE (Error)	49741559.722	138	360446.084
Total	50386517.393	139	

F ratio = 1.78933

Note. Critical F value for $p > .05 = 3.84$